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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,352	03/12/2004	Hajime Washio	55368-DIV (70904)	9890

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EXAMINER

CHOW, DOON Y

ART UNIT	PAPER NUMBER
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2629

DATE MAILED: 07/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/800,352	Applicant(s) WASHIO ET AL.	
	Examiner Dennis-Doon Chow	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-4, 7, 15, 18, 20-22, 29-36, 38 and 39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-4, 7, 15, 18, 20-22, 29-36, 38 and 39 is/are rejected.
- 7) ☒ Claim(s) 37 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 10-13 and 25-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The dependences of these claims are not clear because claims 10 and 25 are depended from the cancel claims 1 and 14.

3. Claims 35 and 38 recite the limitation "the input switching element". There is insufficient antecedent basis for this limitation in the claim.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory

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double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 2-4, 7, 15, 18, 20-22, 29-39 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-28 of U.S. Patent No. 6724361. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present claims are broader than the patent claims..

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-4, 7, 29-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art in view of Maekawa (5128974).

Regarding to claim 29, the admitted prior discloses a shift register comprising: flip flops of a plurality of stages (102, Fig. 32; and 112, Fig. 34).

The admitted prior art does not disclose switching means of a plurality of stages.

Maekawa disclose a shift register comprising switching means (SW, Figs. 7, 10 and 13) of a plurality of stages, and a clock signal inputted to the switching means (see Figs. 7, 10 and 13). Maekawa discloses the switching means is added to the shift register to reduce power consumption (col. 3, lines 12-22).

In light of Maekawa, it would have been obvious to one of ordinary skill in the art to use Maekawa's switching means in the shift register of the admitted prior art so that the power consumption can be reduced as taught by Maekawa (col. 3, lines 12-22).

Regarding to claim 2, the admitted prior and Maekawa disclose M kinds of clock signals are successively inputted to every M number of the flip-flops on a plurality of stages.

Regarding to claims 3-4, Maekawa discloses the M Kinds of clock signals are allowed to have such phases that their high-level periods or low-level periods do not overlap each other, and the duty ratio of each of the M kinds of clock signals is preferably set to not more than $(100 \times 1/M)\%$.

Regarding to claim 7, Maekawa discloses an input stabilizing section for stabilizing an input to each of the flip-flops on the plural stages which the switching means is opened (col. 5, lines 40-43).

Regarding to claims 30-33, the admitted prior art does not disclose the flip-flop being a set-reset-type flip-flop. Instead the admitted prior art the flip-flop being D type flip-flop (see 102, Fig. 32). However, using a set-reset-type flip flop in shift register is well known in the art. Thus, it would have been obvious to one of ordinary skill in the art

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to substitute a set-reset-type flip flop for the D type flip flop of the admitted prior art because the set-reset-type flip flop works better than the D type flip flop.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 15, 18, 20-22, and 34-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Ishii (6670944).

Regarding to claims 34, Ishii discloses a shift register comprising: flip-flops of a plurality of stages (col. 11, lines 17-30, 62-67); and level shifters of a plurality of stages (1510, Figs. 4, 9, 12), each for voltage-raising a clock signal, wherein; each of the level shifters is such that a clock signal voltage raising operation thereof is controlled by the flip-flop on an immediately preceding stage to that level shifter through ma output signal from that flip-flop; and the clock signal voltage-raised by that level shifter is an input to the flip-flop on ma immediately succeeding stage and an output pulse from that succeeding stage in the shift register.

Regarding to claim 15, Ishii further discloses each of the level shifter is provided with a current-driving type voltage-raising section (Figs. 5 and 14).

Regarding to claim 18, Ishii further discloses the level shifter comprises an output stabilizing means for maintaining an output voltage at a predetermined value at the time of stoppage (Figs. 5 and 14).

Regarding to claims 20-22, Ishii further discloses M kinds of clock signals are successively inputted to every M number of the flip-flops on a plurality of stages, each of the M kinds of clock signals is allowed to have either a phase in which high-level periods do not overlap each other or a phase in which low-level periods do not overlap each other, and the duty ratio of each of the M kinds of clock signals is set to not more than $(100 \times 1/M)\%$ (col. 4, line 17 to col. 12, line 45).

Regarding to claim 35, Ishii further discloses the output signal of the flip-flop on each one of the stages is inputted to the voltage-raising section of the level shifter on an immediately succeeding stage so that the corresponding level shifter is stopped by applying a signal having a level so as to cut off the input switching element (Figs. 4, 9 and 12).

Regarding to claim 36, Ishii further discloses the output signal of the flip-flop on each one of the stages stops a power supply to the level shifter on an immediately succeeding stage so that the corresponding level shifter is stopped (col. 16, lines 11-30).

10. Claims 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii.

Ishii does not disclose the flip-flop being a set-reset-type flip-flop. However, using a set-reset-type flip flop in shift register is well known in the art. Thus, it would have been obvious to one of ordinary skill in the art to use the set-reset-type flip flop as the flip flop in Ishii's shift register because the set-reset-type flip flop works better than other type flip flop such as the D type flip flop.

Allowable Subject Matter

11. Claim 37 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

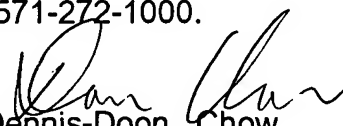
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis-Doon Chow whose telephone number is 571-272-7767. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on 571-272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Dennis-Doon Chow
Primary Examiner
Art Unit 2629

June 22, 2006